~~4058~~
5392 165
a

CONSIDERATIONS
ON THE
PROBABLE COMMERCE
AND
REVENUE,
THAT MAY ARISE ON THE
Propoſed Canal,
BETWEEN
Newcaſtle and Maryport.

Arm. 304

NEWCASTLE:
Printed for J. WHITFIELD, Bookseller, Bridge-end,
and sold by him; and the other booksellers in Newcastle,
Hexham, Carlisle, Whitehaven,
&c. &c.

1796.

1651/1753.

PATENT OFFICE LIBRARY.

1979

BRITISH LIBRARY

PATENT OFFICE LIBRARY

EXCEPTING the Landholders, and Merchants, who are particularly intereſted in carrying forward this, or any other Canal, *that improves the value of their eſtates, and increaſes the commerce of the country*; there can be no inducement to other adventurers, but public ſpirit, and the expectancy of having their money well ſecured, with the probability of receiving more than uſual intereſt, and the facility of transferring that property at a premium equivalent to its immediate, or expected, increaſe of value. As I propoſe to become an adventurer, and fall under the latter deſcription, I have taken ſome pains to inveſtigate from what cauſes the revenue is to ariſe, which is to recompence the adventurer in the Canal from NEWCASTLE to MARYPORT: and as the information I have received may be uſeful to be known, I ſhall now lay it before the public. —In many inſtances I muſt, in ſome degree, be miſinformed, or miſtaken, and therefore I ſhall give an opportunity, for every reader, to correct my ideas, by leaving a blank for the quantity of tonnage; and ſhall only enumerate the articles and places, and inſert the diſtances on the Canal, and uſual rates of toll.—I ſhall, however, on the oppoſite ſide. give my ſentiments on the reſult of the information I have received, which the reader, in filling up the correſponding columns, may adopt, or increaſe, or diminiſh, as his judgement may guide him.

Mr Chapman has inform'd me that the dimenſions of the Canal, as propoſed by Mr Jeſſop and him, is not calculated for the general uſe of larger veſſels than uſually navigate Canals: but that, by due proviſion, and under certain reſtrictions, *veſſels calculated for ſea voyages* may be permitted to paſs; *capable of carrying ſixty tons dead weight, in the Canal, with all their ſea apparatus*; and that by having double ſets of anchors, cables, leeboards, boat, &c. which may be ſtored, or left, at each extremity, they will carry ſo much more weight of merchandize. He alſo obſerves that in light articles theſe veſſels will ſtow as much as common ſea veſſels of eighty or ninety tons burthen, and that if they have not ſuch an aſſorted cargo as will fill them, at the draught of water limited by the Canal, they may take to the extent of twenty or even thirty tons more before going to ſea; and of courſe either bring to, or take away from, Newcaſtle or Maryport, as much as a veſſel of eighty or ninety tons. And he futrher ſays, that by giving one foot extraordinary height to the bridges, an additional foot depth of water may at any future time be obtained in the Canal, by raiſing the locks and embankments; and that the veſſels in this caſe may navigate with eighty tons through the Canal.

Although I conceive that moſt of the commerce, to and from other ports, will come and go in the common ſea veſſels, owing to the great advantage of Newcaſtle and Maryport being both coal ports, *where veſſels from almoſt every quarter return in ballaſt*; yet there are various coſtly and brittle articles that, becauſe of the riſque of loſs or breakage, had better pay more freight than be tranſhipped: from which cauſe we ſee, by a late advertiſement, that the traders from Leeds to London are going to be increaſed in number, from four to ſix, in place of conveying their goods to Hull by the Canal traders and reſhipping them, as formerly.

One

One great objection to tranſhipping, is, that where any damage, or defalcation, takes place, it is difficult to fix under whoſe charge it happened; and it alſo often requires an intermediate conſignment: but neither of theſe inconveniences need take place in the commerce from London to Dublin, or the other ports that will be mentioned, becauſe the owners of the Newcaſtle and London traders, may likewiſe have veſſels ſuited to the Canal and ſea navigation, into which they may tranſhip the articles the traders may bring down, and thus may make themſelves accountable for the whole diſtance.

Having now explain'd the means by which a conſiderable paſſage acroſs the kingdom may be expected in various articles of great value, in which expedition and ſaving of inſurance is of moment, I ſhall begin the ſtatement I have promiſed.

ARTICLES OF COMMERCE.

1 TIMBER, deals, iron, flax, &c. from Newcaſtle to Carliſle, and places ſhort of it. And bacon hams, butter, linen, cotton, &c. from Carliſle, Brampton, &c. to Newcaſtle

Tons, average diſtance miles, rate 2d. per ton per mile.

2 Increaſed quantity from reduced charge of conveyance

Tons at

3 Carriage of various articles of merchandize from Newcaſtle, to beyond Carliſle, (viz.) to the intervening ſpace between there and Maryport, and back to Newcaſtle; the whole on the average diſtance of the Wigton branch, (viz.) 75 miles

Tons for 75 miles, at 2d. per ton per mile, (viz.) at 12s. 6d.

4 Potatoes from Cumberland to Newcaſtle, at the average diſtance of Brampton, (viz.) 53 miles, or 8s. 10d. per ton

Tons at 8s. 10d.

5 Potatoes to London, tons at 8s. 10d.
To Dublin from Brampton and places more weſtward, average diſtance about 30 miles tons at 2d. per ton per mile, (viz.) at 5s.

PROBABLE QUANTITY OR AMOUNT.

1 THE preſent quantity, under the great inconvenience of land carriage, including both ways *ſeparately*, appears on reſpectable information to be 10000 tons: and nearly the whole of it, between the extremes of Newcaſtle and Carliſle; which by the Canal would be 63 miles. If 13 miles be ſtruck off, the amount of toll would be £.4166

2 If we go by what has taken place on other extenſive Canals; the quantity would be more than doubled; but as I mean to make a ſeparate article of the commerce that will ariſe from extending the conveyance of goods from Newcaſtle to beyond Carliſle, I will only eſtimate the increaſe from cheaper conveyance to amount to one-fourth 1041

3 It muſt now be conſidered that timber, deals, and iron from Newcaſtle, will, in conſequence of a Canal, come very near to Maryport, at the price they can have them by ſea. Therefore 2000 tons appear to me as little as can be conveyed both ways, and would amount to 1250

4 The ſoil about Brampton is uncommonly well ſuited for producing the dry or mealy potatoe; which is ſold now at Brampton* at leſs than half the price that article is at Newcaſtle; yet the difference, great as it is, is ſo little above what will pay the price of land carriage, that the dealers have not ſufficient inducement to reſort much thither:—but, were the Canal once made, the ſmall charge of conveyance would probably be the cauſe of Newcaſtle being ſupplied with nearly the whole of its conſumption from that quarter; particularly as the lands now producing the ſupply of Newcaſtle, would, on the reduction of price, be advantageouſly turn'd to the produce of wheat or other grain.

From the enquiries I have made, it appears that a quarter of a ſtone (3½lb.) of potatoes per week is on an average conſumed by every individual, (viz.) 1⅛ cwt. annually

The population of Newcaſtle and Gateſhead will be about 40000, and at the above rate the whole conſumption ſhould exceed 3200 tons; and if 2000 be allowed to come from the weſtward, accounting nothing for Hexham and other towns, the amount would be 883

5 Vaſt quantities of potatoes go in ſmall veſſels from the Humber to London; and from Lancaſhire to Ireland.—The ſame event may take place from the vicinity of Brampton and of Carliſle.

£.7340

---

* *At 4s. the ſack of 3 heap'd buſhels, or about 2 cwt.*

6 Coals from Benwell, and the weſtward collieries, to the propoſed baſon above the Weſt Gate of Newcaſtle, average diſtance 5 miles, and rate 1½d. per ton per mile

Tons at

7 Coals to Hexham from the collieries near the line, either to the eaſtward or weſtward,

Tons 12 miles at 1½d. (viz.) at 1s. 6d.

8 Coals to Haydon Bridge, Langley Mills, &c. including the adjoining villages. Diſtance from the weſtward collieries, above 8 miles

Tons at 1.s per ton

9 Coals to Carliſle and the adjacent villages, and the manufactories. The Earl of Carliſle's collieries are the neareſt, and the diſtance from the propoſed colliery baſon to the deſigned baſon at Carliſle will be nearly 12 miles

Tons at 1s. 6d.

£. 7340

Carliſle.—This might in ſome years† mount high indeed: but including the ſupply of the ſmall towns it cannot be over-rated at the ſame with the preceding article. 883

6 The conſumption of coals (excluſive of manufactories) of towns of a ſimilar climate depends much on the cheapneſs of fuel.—In London the conſumption is nearly about a ton annually for each individual of its population.—In Mancheſter the conſumption is about two tons annually; and about half as much more for its Manufactories.

In Newcaſtle the mean conſumption is a fother of coals, or one-third of a Newcaſtle chalder, (nearly 18 cwt.) per month, for every conſtant fire, equalizing the kitchen fire with the reſt.

This averaged through the different ranks of the houſes and numbers of inhabitants, will, I think, produce rather more than two tons annual conſumption for each individual; but call it two tons. The manufactories I take no notice of, becauſe they lie near the river, and will be ſupplied by that channel.—So alſo may the inhabitants of the lower part of the town; but the major part of it which has hitherto been ſupplied by land carriage, will conſequently draw their future ſupply from the propoſed baſon without the Weſt Gate; from whence, on account of the almoſt general declivity to every part of the town, one horſe will draw a double horſe cart.—And ſuppoſing only 16000 inhabitants to be ſupplied from this channel, the amount of toll would be . 1000

7 Hexham I ſuppoſe contains about 4000 inhabitants; and whether it obtains its coal from Wylam colliery and thoſe to the eaſtward of it; or from Unthank colliery and thoſe to the weſt; the diſtance will be above 12 miles, and admitting the trivial coal works in the neighbourhood to ſupply the manufactories, the amount of toll would then be 8000 at 1s. 6d. 600

8 Haydon Bridge, Langley Mills, and the other Smelting Mills that are, or may be, in the neighbourhood, ſhould, I think, if all the other villages be thrown into the maſs, conſume half as many coals as Hexham—which will amount to 200

9 The manufactories at Carliſle conſume nearly 3000 tons of coals annually; and the town and adjacent villages contain about 12000 inhabitants; which, at only 1½ tons each, would require 18000 tons, or in all 21000. 1575

Coals

£. 11598

---

† *A fair average crop of potatoes, from land duly prepared, is 6 tons per acre; but taking it only at 5, a ſingle mile ſquare would produce upwards of 3000 tons: from whence may be judged the great extent this commerce is capable of.*

10 Coals from Lord Carliſle's baſon to the numerous villages from Kirkandrews to little Banton incluſive

The diſtance to the former is rather more than 15 miles, and to the latter a little leſs than 22 miles: the mean diſtance 18 miles

Tons at 2s. 3d.

11 Coals from Maryport or from Gilcrux to Allonby, and the villages and towns, from thence to Gambleſby, (viz.) Coupar, Abbey Holm, &c. &c. Average diſtance about 12 miles

Tons at 1s. 6d.

12 Coal ſleck, or ſmall coals, for burning lime at the lime works that are, and would ariſe on the north Tyne, near Wall, and at Corbridge ,&c. The average diſtance from the neareſt colliery on the navigation, (averaging alſo the quantities) about 12 miles

Tons at ¾d. per ton per mile, (viz.) at 9d.

13 Lime to the town of Newcaſtle; and to the adjacent country for manure; average diſtance 18 miles

Tons 18 miles at 1d. per mile per ton, or at 1s. 6d.

14 Lime† throughout the intervening country eaſt of the weſt end of the ſummit level.

Tons at

15 Lime from Lord Carliſle's baſon* through the country towards Carliſle, and more weſtward: and from Gilcrux to the eaſtwrad.

Tons 13 miles at 1d. (viz.) 1s. 1d.

---

† *This lime will in part go from the limeſtone quarries a little eaſt of Ridley Hall Bridge.*

* *The lime from the weſt country, I ſuppoſe, will be ſhipped there until the branch towards Ullswater be extended to Caſtle Carrick, which is cloſe in the vicinity of extenſive lime works.*

£. 11598

10 Coals from the Earl of Carliſle's baſon to the numerous villages from Kirkandrews to Little Banton incluſive, cannot well be leſs than 5000 tons, which would produce a toll of 762

11 The conſumption of the towns, villages, and country, from Allonby to Gambleſby, cannot well be aſcertained, but admitting Wigton not to be taken into account, I ſuppoſe it would equal the preceding article, (viz.) 5000 tons, which would produce a toll of 175

12 The quantity or proportion of coal fleck uſed for burning of lime, depends on the qualities of the *coals* and the *limeſtone;* and is generally between $\frac{1}{4}$ and $\frac{1}{3}$ of the weight (not of the meaſure) of the *quick lime.* Then, ſuppoſing 40000 tons to be burnt annually for the conſumption of the adjacent country, for the tillage on the line both ways, and for the buildings in Newcaſtle and other towns; and only one-fourth of the weight of ſmall coals to be conſumed; the toll produced would be 375

13 Lime to Newcaſtle and other places for building; and to the adjacent country in the lower part of the line for manure; will, I ſuppoſe, not be over-rated at 12000 tons, which would produce 900

14 The carriage would certainly be conſiderable in a tillage country. Admittting four tons of lime to be uſed to an acre, and the fallow to be one third of the tillage land, then 850 tons annually would be required for every ſquare mile under tillage. Gentlemen in the country will beſt know what proportion is under tillage; and to what extent the lime would be drawn from the verge of the Canal.—For this I ſhall inſert no amount, but leave it to go into the preceding article

15 The diſtance between the two extremes from which the lime has to be convey'd, is nearly 40 miles; and the whole country much in tillage. The extent or width of country that will avail itſelf of water carriage will increaſe in proportion to the diſtance from the ſhipping place, and form nearly a triangle, being nothing at the commencement, and a little diſtance from it; but in the courſe of 20 miles increaſing very conſiderably; which, in this inſtance, I will only call 4 miles, at the greateſt extent, on each ſide: conſequently the whole water carriage within the influence of the *two extremities producing the lime* would be to *a diſtrict of* 160 *ſquare miles.*—Allow half of this only to be in tillage; and then, according to the obſervation in the preceding article, the quantity will be 68000 tons.

If half of the land ſhould not be in tillage; it is compenſated for by allowing nothing for the towns, and having too much limited the lateral effect or extent within the influence of the Canal.

£. 13810

16 Lead from Haydon Bridge, Hexham Bridge, and Corbridge, *average* diſtance 24 miles, at 2d. (viz.) 4s.

Tons at 4s. £.

17 Back carriage of timber, iron, grain, flour, &c.

Tons at 4s. £.

18 Paſſage boats from Newcaſtle to Carliſle, and from Carliſle to Maryport, each in one day.

£. 13810

Canal.—According to the foregoing premiſes, the *average diſtance of conveyance of the whole quantity* will be one-third of the whole intermediate ſpace or 13 miles: and the toll of courſe will be 3683

16 The whole quantity of lead is generally allowed to be 150000 Pigs of 1½ cwt. (viz.) 11250 tons: and throwing off 2250 tons for what may paſs clear of the Canal, there will remain 9000 tons which would produce a toll of 1800

N. B. *Part of the lead will go to the Iriſh Channel, and admitting it to go from Haydon Bridge, it would have to pay for 63 miles in place of 30.*

17 The back carriage may be eſtimated nearly at one-half; ſay 4000 tons, which would produce 800

18 The paſſage boats I ſuppoſe will go daily, each way, between Newcaſtle and Carliſle; and every other day from Carliſle to Maryport, (viz.) go one day and return the next.—It will, no doubt, be aſked whence the paſſengers will ariſe; to which I ſhall anſwer, "*make the paſſage convenient, expeditious, and cheap, and hundreds will travel who never thought of it before.*

We have already been told that the Dublin Canal, upon about half the diſtance of the one now propoſed, produces a groſs revenue of 14000 a year: but I ſhall now adduce caſes more in point. The 1ſt is on a ſhort Canal, not yet completed, between Cheſter and the river Merſey, near Whitby; upon which they run a paſſage boat to meet other *boats that ply up the tideway of the Merſey from Liverpool.* The Merſey termination of this Canal is 3½ miles above Eaſton, *the uſual ferry on the road from Cheſter to Liverpool,* which, of courſe, occaſions *a more tedious and uncertain paſſage.* The baſon at Cheſter is not yet opened; ſo that the paſſengers have a walk from the town; and the boat goes ſo ſlowly that a man may walk as faſt along the banks; yet, *notwithſtanding all theſe inconveniences,* and the boat having only plied about ſeven months; the proprietors, as the writer was informed, received in the half year rather above £. 500; at the low rate of 1s. 6d. for the chief cabin, and 1s. for the ſecond: and what is worthy of remark only one ſolitary coach paſſed between Cheſter and Eaſton before the eſtabliſhment of this boat.—If eight miles, under the inconveniences I have mentioned, produce a *thouſand pounds* annually, we may reaſonably ſuppoſe that nearly twelve times the ſpace paſſing by Gilſland Spaw, and by many conſiderable towns, ſhould produce a neat revenue of £. 3000.—In aid of which idea I am informed that the proprietors of the Lancaſter navigation might have £. 3500 a year for a leaſe of their intended paſſage boats. 3000

£.23093

19 Covered market boats, carrying country people and their different articles for ſale, (not exceeding a given weight) from Hexham, Corbridge, Bywell, Ovington, Ovingham, &c.

20 Market boats to Carliſle and Maryport, Allonby, &c. where long levels permit

ARTICLES of MERCHANDIZE

that will paſs through the whole line, diſtance 94 miles, but ſay 90 miles, at 2d. or 15s per ton.

21 *From Ireland*—Barrel'd beef and pork, bacon, hams, butter, linen, yarn linen, rape ſeed, oats, &c. Alſo herrings, both from Ireland and the *Iſle of Man*.

Tons at

22 To Ireland, viz.—to Dublin and the north-eaſtern ports, Cheſts of tea, Eaſt India ſugar, and ſuch other valuable articles, in which, ſaving of time is of great moment.

Tons at

£.23093

19 As the whole of this ſpace is propoſed to be one continued level; and conſequently no interruption or danger from paſſing locks in the night; the boats may at every ſeaſon of the year, ſtart from, or paſs by, thoſe different places at an hour ſufficiently early to attend the different markets at Newcaſtle, and may return after the market is ended. By this means the country people *without taking their horſes from the work of their farms, or being at the expence of keeping them in town;* will travel more expeditiouſly, and without expoſure to the inclemency of the weather. I therefore think we may fairly rate (as the number, from the facility, of conveyance will be much increaſed from what they are at preſent) that, on an average, two hundred people will paſs and repaſs on each of the two weekly market days; and calling the average charge 1s. each way; the groſs produce will be £.40 per week or annually 2080

The profit ariſing from the extraordinary concourſe of people on the races, aſſizes, and other public times, will probably do more than pay the charge of horſes and men for drawing and navigating the market boats; and I have therefore inſerted the groſs amount of their ordinary produce.

20 Theſe places conjointly ſhould produce at le one-third as much as to Newcaſtle 686

21 The amount of theſe articles: if the paſſage be found much more expeditious, to and from London; and there be many Belfaſt and other traders, built upon a plan ſuited to the navigation; and encouragement be given by a reduction of toll; may amount to three or four thouſand tons; but I will call it only 1500 tons, *at the full toll.* 1125

22 The ſaving, in point of time, in ſuch a valuable article as tea; which is alſo paid for in ready money; is of ſo much moment, that *a large portion of it* is now ſhipped from Liverpool; ſubject to the following charges, (viz.) for land carriage from London to Birmingham, and Canal carriage from thence to Liverpool £.6 per ton: freight from Liverpool to Dublin 2s. 6d. per cheſt: averaging about £.2 per ton more.
Now, *Canal tolls included,* 3s. a cheſt would be a reaſonable freight from Newcaſtle, and by the table of freightage at the end of this work, it will appear that the Dublin Merchant may ſave above £ 4 per ton; which, *as the expedition would in general be as great,* would be a ſtrong inducement to take this channel.— The imports of tea to Dublin, Belfaſt, &c. may eaſily be acquired

£.26984

23 To Liverpool.—Wheat, Barley, &c. from Warnmouth, Alemouth. &c. on the coaſt of Northumberland*
Tons at

24 From Liverpool, and more particularly from Lancaſter.— Coffee, and other Weſt India products for Hambrough, Holland, &c. and alſo Staffordſhire ware to Newcaſtle for both foreign and home conſumption. Likewiſe Cheſhire cheeſe, and ſome ſalt.
Tons at

25 To Dumfries, Kirkcudbright, &c. (viz.) to the ſouth coaſt of Scotland within the Mull of Galloway, and to Maryport, Workington, and Whitehaven. All or moſt of the articles of merchandize they procure from London.

26 To Ireland, to the Iſle of Man, and to the ports of Scotland and England adjoining Solway Frith.

Bottles, crown glaſs, copperas, common earthen ware, painters' colours, ſpaniſh white, various coarſe articles of iron ware manufactured in the neighbourhood of Newcaſtle, dreſſed flax, and conſiderable quantities of cordage.

---

* *Canal veſſels with grain from Northumberland, the Kiel Canal, &c. to Liverpool, or the adjacent coaſt; may carry* 40 *or* 50 *laſts of wheat, by having the upper* 10 *or* 15 *laſts in bags; which, in a couple of hours, may be put in, or taken out of, a ſmall lighter that may accompany the other through the Canal; which would only be* attended with the expence of navigating it, *as the tolls would be the ſame whether in one or two bottoms. The ſame may be done in all articles of convenient package; and it would be the intereſt of the Canal proprietors to build theſe ſmall lighters and afford them without hire: very few of them would be ſufficient; as one veſſel, daily, paſſing to ſea each way, would produce an annual revenue of more than ſix times what the croſs paſſage is now eſtimated to produce.*

£. 26984

quired, and I ſuppoſe they muſt be above 2000 tons; to which if the other ennumerated products be added, the amount ſhould be more than double or treble; but however I will call it only equal to the preceding article, (viz.) 1500 tons, and then the toll would be 1125

In time of war it is probable that London porter, of which there is a great conſumption in Dublin, would go by this channel; but of this I have taken no account in the preceding obſervations.

23 Some veſſels are now loading on the coaſt of Northumberland for Liverpool, which, (London excepted,) is the greateſt, and almoſt always the deareſt market in England for grain. The length of paſſage; and *conſequent increaſe of freight and danger of beating*, cauſe this intercourſe to be only caſual and ſmall: but, were the propoſed communication once opened, I am convinced it would be very conſiderable: however, I ſhall only ſtate it at 800 tons. 600

24 The annual amount of theſe articles I am informed is above 3000 tons, but I will only eſtimate them at 1000 tons, even including the grain they may ſometimes come back with from the Continent. 750

Salt is undoubtedly now ſhip'd from the port of Newcaſtle, but that from Liverpool is ſo much preferable either for curing or repacking proviſions, and their baſket ſalt equally ſo for the table, that there muſt of neceſſity be a conſiderable carriage of that article.

25 All the articles cannot be leſs than 800 or 1000 tons, but I will only eſtimate them at 400 tons 300

If London porter take this channel of conveyance, as moſt probably it will, the quantity of tonnage would be conſiderably increaſed.

26 Theſe articles now find their way by a circuitous ſea paſſage; and *ſome even by land carriage*.—The quantity that paſſes under theſe inconveniences is very ſmall to what it would be by the propoſed communication; which, when once that paſſage is open, I think may reaſonably be calculated at a hundred tons monthly; *to all the places mentioned:* and as ſuch it would produce 900

One of the articles mentioned here, (viz.) ſpaniſh white (and ſimilar inſtances elſewhere occur) would not bear, or be chargeable with, the full extent of tonnage: but theſe ſmall exceptions could not be every where notic'd without being too diffuſe: and are more eaſily compenſated for by reduction in quantity, which I have attended to.

£. 30659

ARTICLES of PRODUCE upon the LINE, whoſe quantity and extent of carriage are not eaſily calculated.

27 Wheat, barley, rye, and oats, turnips and every annual produce of the earth, (potatoes excepted)

Tons at 2d. per mile, miles

28 Oak and other timber which is abundant in various parts; and which may advantageouſly be kept up in ſucceſſion; from the future eaſe of conveyance, and conſequent increaſe of value. This article of courſe includes bark, corf rods, props, waggon-way rails, ſleepers, &c.

Tons at 2d. per ton per mile miles

29 Manure from Newcaſtle and all the great towns, at ½d. per ton per mile.—The produce of this, as productive of toll itſelf, will be inconſiderable: but, in enriching the land and producing future crops, it will be of moment both to the land holder and Canal adventurer.

30 Freeſtone and flags from the quarries on the river Gelt down to Carliſle, and much of the country weſtward.—This ſtone riſes in beds of different uſeful thickneſſes, down to ſuch a degree of thinneſs, as to occaſion it to be very generally uſed for roofing houſes.

The diſtance from the intended aqueduct over the Gelt, to Carliſle, is 8½ miles.—Toll 1d. per ton, unleſs on very long diſtaces where ſome reduction might take place.

Tons at

31 Freeſtone, flags, &c. on other parts of the line.

32 Slates from the head of Ulleswater, that would be ſhip'd at the weſt end of the ſummit level, (viz.) 52 miles from Newcaſtle, for conſumption to the eaſtward.

Theſe ſlates are now frequently brought by land carriage more than one fourth, and to nearly half the way, from thence to Newcaſtle.

Tons at 1d. per ton per mile.

33 Application of the waſte water of the Canal to various purpoſes.

27, 28, 29, 30, 31, 32, 33,—the extent of theſe ſeven ſources of revenue I can by no means take upon me to approximate ſeparately; but I may ſafely ſay that they will produce conjointly ſeveral thouſands a year.

Much will alſo ariſe from the increaſed manufactories of the towns the Canal goes by: many of which have the advantage of great falls of water to move any requiſite machinery.

Not only the manufactories of Carliſle muſt extend very much, but thoſe of Hexham, Haltweſel, &c. in coarſe wollen cloths, Felt hats, and manufactories of leather.

And no doubt, if iron ſtone be found in abundance, as it probably will, great carriage will ariſe from that article for iron furnaces; or of one of the other requiſites, coal or limeſtone; as theſe three are not, in this country, found all near together.

And the produce of theſe furnaces would alſo add to the quantity of carriage.

Likewiſe, if allum ſchiſt ſhould be found near the line, of which there is ſome probability, a conſiderable carriage would ariſe from that circumſtance.

EVENTUAL SOURCES of INCREASE of COMMERCE.

34 A branch towards Wigton, of about two miles upon one level:—this muſt add more or leſs to the carriage of various articles.

35 A branch from a little to the eaſtward of the Eden aqueduct, to croſs the Irthing below Newby, will, in all probability, run without a ſingle lock to the northward of Longtown; and as far into Scotland as neceſſary; north of Annan and Dumfries.—As this is a great tillage country; and is much in want of lime and coals; which, even by land carriage, it draws in large quantities, from the coal fell, and adjacent lime works in the Earl of Carliſle's eſtate; it follows that a very large additional revenue will ariſe on the execution of this branch; which muſt at no diſtant period take place, becauſe it will be highly advantageous both to the land holder and adventurer. *The carriage of theſe articles on the main line would be 6 miles.*

36 A branch will, with a degree of moral certainty, take place from the eaſt end of the ſummit level to Ulleswater: which will include the commerce of Penrith, and occaſion a great carriage of ſlates.—This branch may have probably to deſcend before it croſs up the vale of Eamont; but, if ſo, it will have the counterballancing advantage of being able to run near Temple Sowerby, or perhaps to Appleby, without a lock.

The benefit to the main line will be a conſiderable addition of commercial carriage; and paſſage boat conveyance; and a great carriage of ſlates to the probable amount *of ſome thouſands a year revenue* And to the adventurers in this ſeparate branch there would be *the additional profits of the conveyance of much coal and lime* from near its northern extremity.

37 Between the ſummit level and Newcaſtle, mountain Canals on a ſmall ſcale, with inclined planes, or other means of aſcent and deſcent, may take place One perhaps into the lead country from the high land eaſt of Allen Foot; and another up the vale of North Tyne and Reed Water, from the high land above Newburgh.

Theſe, if they ever take place, will be of more ſervice to the country than the Canal they communicate with; although they muſt be of benefit to the latter,

From

38 From the advantageous circumſtance of the Haydon Bridge level *(of above 200 feet above the ſea)* being brought down to Newcaſtle; a level branch will probably be carried from this town into the fertile part of Northumberland, to a conſiderable extent; which would draw a great quantity of lime along the main line and add to its revenue.

39 The only immediately probable line left, is from the River Tyne into the county of Durham; which, if it ever take place, muſt both receive and give advantages to the great line in queſtion.[†]

It is a favourable circumſtance for the propoſed communication between the eaſt and weſt ſeas, that ſuch particular parts as ought firſt to be begun upon, will become of themſelves highly productive; *independently of their connection with the reſt of the line;* and thus raiſe a revenue almoſt from the firſt; which muſt neceſſarily be attended with an *equivalent increaſe* of the value of the ſums ſubſcribed.

I flatter myſelf that when gentlemen, converſant in all the different circumſtances I have diſcanted on, *ſhall compare and combine their ſeparate degrees of information;* that they will find the adventuring in the propoſed plan not to be a ſpeculation: but to be attended with a certainty of ample ſucceſs.

I ſhall alſo with pleaſure obſerve that this line muſt add to the commerce between the Friths of Forth and Clyde: becauſe it muſt neceſſarily increaſe the number of properly form'd veſſels ſuited to paſs that navigation.—And the Canal of Kiel[*], acroſs the Peninſula of Jutland, will redound to the advantage of both the former; by giving a preference to ſmall veſſels laden with grain from the baltic, but more

---

[†] *The Forth and Clyde Canal is 35 miles long, and its higheſt elevation 156 feet above the ſea.—It admits veſſels af 19 feet 9 inches beam, and of about 63 feet extreme length, and nearly 8 feet draught of water: and its tolls are 5s. 10d. per ton.*

The ſummit level of the Kiel Canal is only 25 feet elevation above the ſea, and its tolls merely nominal, being leſs than the pilotage from the entrance of the River Eyder, to Rendſburg, at the weſt extremity of the Canal.—It will admit veſſels of 9 feet 6 inches draught of water, 25 feet beam, and 80 feet extreme length: (which are larger than the navigation of the Eyder conveniently admits of.)—Both theſe Canals are navigated by ſea veſſels with ſtanding maſts and of the uſual conſtruction.—But the Newcaſtle and Maryport Canal of 440 feet ſummit level and 94 miles in length, is only propoſed to be navigated by veſſels of the dutch conſtruction, with leeboards and ſtriking maſts, and of a length ſuited to the Firth and Clyde Canal, but not exceeding 15 feet beam and 5 feet draught of water. The other Canal veſſels not deſtined to go to ſea, ſhould, for reaſons too prolix be entered into in this eſſay, be limited to leſs width and depth.

more particularly from Wiſmar, Roſtoc. &c. by enabling them to make a paſſage with a North or N. N. E. wind, to the Frith of Forth, or to the Tyne: and of courſe to make a ſpeedy voyage to the weſt of Scotland, or coaſt of Lancaſhire and Cheſhire, without danger of their cargoes being heated; which often happens by the circuitous paſſage: and *cannot be cover'd by inſurance.*

I know of no Canal that has ſet forward with a more ſure proſpect of immediate revenue than the one propoſed between the eaſt and weſt ſeas: and let it be remembered, that whatever commerce ariſes on the opening of a Canal, it very generally, and by a quick progreſſion, becomes doubled and quadrupled.

Newcaſtle, February 4th, 1796.

FINIS.

NEWCASTLE, JANUARY 1ſt, 1794.

The MERCHANTS *and* SHIPPERS *of* GOODS, *from* LONDON *to* NEWCASTLE, *or from* NEWCASTLE *to* LONDON, *are reſpectfully informed, that on account of the unexampled Charge in the* Seamens' Wages, *and heavy expence attending the loading and unloading the* Ships, *in the* Newcaſtle Trade, *a further advance of* FREIGHTS *takes Place this Day; and are as under,*

FREIGHT FROM LONDON TO NEWCASTLE.

	s.	*d.*		*s.*	*d.*
BUTTS of Currants or Aſhes	6	0	Sacks of Clover or Garden Seeds	2	6
Pipes of Wine, Spirits, Cyder, or Oil	7	6	Mats of Barilla Aſhes	3	0
Puncheons of ditto	6	0	Bales of Cloth, Paper, or Books	5	0
Half ditto ditto	3	0	Large Truſſes of ditto	2	6
Hogſheads ditto	4	0	Smaller ditto	1	6
Half ditto ditto	2	0	Bundles of Mercery and Drapery	1	6
Hogſheads of Sugar or dry Goods	4	0	Smaller Boxes or Parcels	0	9
Tierces of dry Goods	2	6	Boxes of Candy or Plumbs	0	10
Large Barrels, or Barrels of Rice	2	0	Bales of Butts per Cwt	1	3
Smaller ditto	1	6	Wool or Cotton per Pack	4	6
Bags of Hops	3	6	Bags of Old Shoes	2	6
Pockets of ditto	1	9	Ditto of Old Clothes	2	0
Quarter Cheſts of Tea	1	6	Barrels of Porter	2	0
Half Cheſts of ditto	2	0	Kilderkins of ditto	1	0
Whole Cheſts of ditto	3	0	Barrels of Salt Petre	1	3
Bags of Nuts	1	6	Ditto of Gunpowder	3	0
Cheſts of Fruit	2	0	Ditto of Bone Aſhes	1	2
Cheſts of Starch and Soap	2	0	Quarter Barrels of Raiſins	0	10
Bags of Pepper, or Carraway Seeds	2	0	Whole Bags of Shumac	2	0
Bags of Rye Graſs	1	9	Ditto of Dye	2	0

	s	d.
Mats of Straw Woalds	1	8
Jars of Oil	4	0
Half ditto	2	0
Cork Wood per Bundle	1	6
Crates of Earthen Ware	2	6
Larger ditto in proportion to ſize		
Barrels of Pitch, Tar, Roſin, and Herrings	1	6
Cakes of Roſin	1	0
Mahogany or other Wood per Ton	12	0

	s.	d.
Hemp or Flax per Ton	12	0
Ruſſia Tallow per Hogſhead	3	0
Soap per Barrel	2	0
Carboys, Vitriol, or Turpentine	2	0
Firkins of Paint	1	0
Boxes of Tin	1	0
Stain'd or other Chairs, each	0	9
Pipes or Puncheons of Water	5	0
Iron, Lead-aſhes, or Broken Glaſs per Ton	2	6

N. B. All other Goods in proportion, by the Bulk or Weight.

FREIGHTS FROM NEWCASTLE TO LONDON.

	s.	d.
LEAD per Pig	0	9
Bottles per Dozen	0	2½
Red and White Lead or Sheet per Ton	12	0
Painters Colours per Ton	15	0
Copperas per Ton	15	0
Butter per Firkin	0	7
Tallow per Hogſhead	12	0
Tanned Leather per Cwt.	1	6
Hams or light Goods per Hogſhead	10	6

		s.	d.
Earthen Ware per Crate		5	0
Manufactured Iron Goods and Steel per Ton		12	0
Bales of Drapery Goods		9	0
Packs of ditto		5	0
Brown Papers	Imperial per Ream	0	7
	Four Pound ditto	0	6
	Bag Cap	0	4
Rags per Ton		20	0

On Account of the great difference of the [illegible], all other Goods ſmall or large in Proportion.

BRITISH LIBRARY

PATENT OFFICE LIBRARY